App. F. IX-4

1940

193 ( )

File No. 23-40.

Serial Nos. 1-2

Previous References

P.P. 96-28(1-11)

P.P. 38-41(1-3)

P.P

Later References.

P.P. 38-41(1-3)

" ~~38-4~~

P.74

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. Two only

Part B for December 1940.

SUBJECT.

Panel of Examiners for examinations conducted by the Federal Public Service Commission.

WD 0578—GPB—22,500—12-9-89

4/41/4

B.B. Shanahan

14.12.40.

1212
P.C

Panel of Examiners for examinations conducted by the Federal Public Service Commission

General and Revenue Secretariat | PP File No. 23 of 1940. | [App. F. III-2

Serial No.	
1	From The Secy to the Hon'ble the Resident No D.F. 526-40 Gt A dated 4th Sept. 40 regarding that the information asked for from the F.P.S.C may kindly be sent to the Residency before the 15th Dec. 1940. It is seen from Flag O of the file placed below that the Regr. Mysore University, D.P.I., Chief Engineer P.W.D. and Secy to Govt Electrical Dept were consulted each the Gentlemen suitable for inclusion in the panel of examiners. A consolidated list of Gentlemen recommended on the last occasion is placed below (Vide Flags P & Q). It is observed from the list that some of them have since deceased and some have left the Mysore Service. Submd for orders whether the above Heads of Depts may be consulted now also. A copy of the F.P.S.C letter will be sent to them with a request to prepare a fresh list. They will also be requested to get copies of the forms direct from the Commission since the Residency has sent only one copy extra to this office. Submd for perusal and orders. (RS 22/8) The University, the Education, P.W.D and Electrical Departments may be consulted as was done on the last occasion. MRN 22/8 Chief Secy Maybe done. MRN 26/8

CHIEF SECRETARY. 22 AUG 1940 GOVT. OF MYSORE.

2097/9

Panel of Examiners for examinations Conducted by the F.B.S.C

General and Revenue Secretariat | File No. | of 194 | [App. F. III-2

Serial No.

From The Chief Engineer

3705 of 26th Sept. 40 forwarding a list of names for inclusion in the list.

Subd with a draft to the Chief Engr requesting him to fill up the particulars in the prescribed Form, which are obtainable direct from the Commission, as seen from Para 2 of their letter and as already intimated in Flag B.

TYPING SECTION 28 SEP. 1940 GEN. & REV. SECTT.

RA 27/9

Issue Now 29/9

Issue U/S of 28th Sept. 40 to the C.E.

From The D.P.I.

D.O. F.5-774-8 of 1940-41 of 24th addr. 40 re. the recommendation of Mr. Sultan Mohiyuddin on the last occasion

Flag A

Regarding the question raised in the DPI's letter. Kind reference is invited to the then DPI's letter of 25th May 40 enclosing two forms only filled up. No reasons have been given for the recommendation in the letter. Kind attention is invited to the Form (enclosed to the above letter) re: Mr. Mohiyuddin. If approved, the DPI will be informed that no reasons have been given by the then D.P.I re: Mr. Mohiyuddin's selection and if necessary, a copy of the form sent on the last occasion will be sent to the DPI for perusal. Subd for perusal and o/s.

RS 29/X

NOTE—Contn. Sheet.

Though no reasons were given in the former D.P.I's letters for including Mr. Sultan's

OFFICE OF THE SECOND MEMBER OF COUNCIL

The member has left the office and will be out town for a fortnight. Hence the file is pstd

Prot^ B.. with Compts

Mem 9/12/46

9.12.46

316.5
3261
3485

Panel of examiners for examinations conducted by the P.S.C. — 3485

General and Revenue Secretariat | P.P. File No. 23 of 1940. | [App. F. III-2

Serial No.	
	From The Chief Engineer. Letter no 7026 d 5th Dec. 40 forwarding six statements with the required particulars in the prescribed form. The Chief Engineer has recommended 6 names from his Dept, Mr. Macalpine from his dept and the Regr. University has recommended the names of 26 Profs and 8 Asst Profs. The present list includes some of those who were in the previous list and who are still in this University. Subd with a draft reply to the Registrar.
	For approval 9/12 (Chief Secy) For perusal 2nd member Dewan 9.12.40 9/12 10/12/40 10/12
2	Issue Pd 8387 11th Dec. 40 to the Registrar

1. 1940 3762

PB 9/12

PB

NOTE—Contn. Sheet.

1212/P Pol 365

Letter from the Secretary, Federal Public Service Commission No.F.2/8/40-E, dated the 26th July 1940.

P.P. 23-401

---:0:---

Panel of Examiners for examinations conducted by the Federal Public Service Commission.

I am directed to invite a reference to the correspondence ending with your letter No.6323/167/1928 Ecn.14 dated the 25th July, 1929, on the above subject, and to request that any additions, omissions or changes in the list of examiners previously forwarded by the Government of Mysore may kindly be intimated to the Federal Public Service Commission before 1st January 1941. The Commission would be glad if you would indicate the cause of any omission from the list, especially in the case of any examiner who has been transferred to another province/Department, or is unwilling, or is considered unsuitable to undertake further examination work for the Commission.

2. If any new examiner is recommended the Commission would be glad to have full particulars concerning him in the prescribed form spare copies of which are forwarded herewith. Additional copies may, if necessary, be obtained from the Commission.

3. The Commission are particularly anxious to secure the help of senior members of the Educational Department or of other superior services as examiners, and will be glad if you make suitable recommendations. I am to add that persons recommended for inclusion in the panel need not necessarily be Government Servants and that the Commission are willing to consider the claims of scholars and educationists of standing who are working in Universities, Colleges, or even Schools. Indeed, they would welcome the names of experienced and reliable Schoolmasters and Schoolmistresses, who could help them in their more junior examinations.

4. I am to enclose a revised list of all the subjects in which the Commission conduct an examination or examinations.

---:0:---

CHIEF SECRETARY P.P. 21 AUG. 1940 GOVT. OF MYSORE

The Office of the Hon'ble the Resident in Mysore,

Dated Bangalore, the August 1940.

No.D.F.526-40/G&A.

Copy, with enclosures, forwarded with compliments, to the Chief Secretary to the Government of His Highness the Maharaja of Mysore, Bangalore, with reference to his letter No.Pol.90/P.P.96-28-11, dated the 18th July 1929, with the request that the information asked for may kindly be sent to this Residency before the 15th December 1940.

By order, etc.,

SECRETARY TO THE RESIDENT.

BJ

FORM.

1. Name.

2. Permanent address.

3. Subject or subjects and standard or standards for which *proposed* as examiner or moderator.

4. Academic or other similar distinctions. (In the case of technical subjects, membership of technical institutions of high standing, *e. g.*, the Institute of Civil Engineers, the Institute of Electrical Engineers etc., should be mentioned.)

5. Present position.

6. Teaching, experience if any.

7. Examining experience, if any.

8. List of publications of a learned or scientific character.

9. Remarks, if thought necessary.

GIPD—S3—179 FPSC—24-2-40—500.

54. Zoology	A & B
55. Physiology	A & B
56. Astronomy	A
57. Social Anthropology	A
58. Law (Constitutional Law of the British Empire, Jurisprudence, Torts, Indian Law of Contract, Indian Evidence Act and Indian Penal Code)	A & B
59. Indian Criminal Law & Procedure	A
60. Applied Mechanics	A
61. Electrical Engineering	A
62. Prime Movers	A
63. Hydraulics & Hydraulic Machines	A
64. Construction—(*a*) Building Materials (*b*) Design of structures and (*c*) General principles governing design of railways, roads, harbours and works of a similar kind	A
65. Surveying	A
66. Sanitary Engineering and Water Supply	A
67. Electrical Communication Engineering	A

NOTE 1.—For subjects marked with a capital "A" the Federal Public Service Commission require examiners capable of setting a paper up to the standard of a Master's degree of an Indian University; for subjects marked with a capital "B" examiners capable of setting a paper up to the standard of a pass degree of an Indian University.

NOTE 2.—The syllabuses for subjects 60-67 are enclosed.

GIPD—M 68 F. P. S. C.—25-5-40.—500.

SYLLABUS OF THE EXAMINATION HELD BY THE FEDERAL PUBLIC SERVICE COMMISSION (INDIA) FOR RECRUITMENT TO ENGINEERING SERVICES.

NOTE.—There will be no practical examination in any of the subjects.

Applied Mathematics.

Statics.—Vectors. Notion of force. Gravitational or Engineer's unit of force. Various kinds of forces. Friction. Composition and resolution of concurrent forces. Moments. Parallel forces and centres of gravity. Couples. Conditions of equilibrium of non-current coplanar forces. Funicular Polygon.

Kinematics.—Units of space and time. Rectilinear motion; motion of a projectile; angular motion; relative motion; simple harmonic motion.

Kinetics.—Newton's Laws. Absolute system of units. Linear momentum. Impact of elastic bodies. Impulse and impulsive forces. Angular momentum; moments of inertia and radii of gyration; impulsive torque. Centrifugal forces, Conical pendulum. Motion of the centre of mass. Cant on railway curves and banking of road-tracks. Hoop stress and stress in the rim of a fly wheel.

Work, power, kinetic and potential energy. Principle of energy. Kinetic energy due to rotation. Work done by a couple. Principle of Virtual work. Simple machines, mechanical advantage, and velocity ratio. Stable and unstable equilibrium. Deflection in a framed structure. Oscillations. Simple and Compound pendulum. Units and dimensions.

Hydrostatics.—Fluid pressure, its transmission, and measurements; density; specific gravity; metric system of units; resultant pressure; centre of pressure; equilibrium of floating bodies; metacentre. Laws of Boyle and Charles. Mixture of gases. Nature and action of simple hydraulic machines.

Applied Mechanics.

(*a*) *Buildings.*

Consideration of materials used in the construction of roof-trusses. Steel and timber. Determination of stresses in trusses by various methods. Deadloads and wind pressure. Factors of safety and working stresses.

Design of roof-trusses. Various types of roof-trusses and roof coverings; collar beam and hammer beam trusses.

Use of Euler's, Gordon's, Rankine's, Fidler's, Johnson's and straight line formulæ in the design of struts. Buckling factor of struts; curves showing comparative strength of struts obtained by various formulae. Choice of size of sections. Finish of steel work. Joints. Design of end-bearings; methods of fixing and supporting ends.

Application of circles and ellipse of stress and Clapeyron's theorem to design of structures.

Cast Iron and Steel Columns.—Flange and web connections to steel columns; caps bases; transverse bracing of columns.

Foundations.—Safe pressures; foundations for columns. Slab foundations; cantilever foundations; Grillage foundations. Wells. Piles.

Retaining Walls and Earth-pressures.—Rankine's theory. Wedge theory, Winkler's and Bligh's graphical constructions, with corrections. Design of various types of retaining walls in masonry.

Tall Masonry and Steel Chimneys.—Theory and design.

Design of steel and masonry reservoirs: with considerations of wind-pressures.

Deflection of framed structures and determination of stresses, etc., in redundant frames.

Influence diagrams for bending moment and shear for uniformly distributed and irregular loads on trusses, built-in beams, and three-pinned, parabolic, semi-elliptic and semi-circular arches.

Prime Movers.

Fuel Gas Plants and Boilers—

Fuel.—(*a*) Coal, wood, petroleum, gas, petrol, alcohol, etc., physical characteristics, approximate chemical composition; heat of combustion.

(*b*) *Gas Plants.*—Gas Producers; pressure and suction plants; arrangement and working.

(*c*) *Boilers.*—Draught; natural forced and induced. Ordinary forms of stationary, locomotive, marine, water-tube, and other type; heating surface, firegrate area; boiler efficiency; superheaters; feedwater heaters; accessories and management.

Theory of Heat Engines—

(*a*) Thermodynamical principles; Carnot's cycle; perfect heat engine; second law.

(*b*) *Air Engines.*—Stirling and other forms.

(*c*) *Internal Combustion Engines.*—Gas, oil and petrol engines with fluid pistons; types and working; features of cycles. Proportioning of mixtures; efficiencies.

(*d*) *Steam.*—Thermodynamics of the generation, expansion and condensation of steam; heat diagrams, etc.

(*e*) Steam Engines and turbines, with special reference to modern developments.

(*f*) *Refrigerating Plant.*—Theory and general arrangement of the more common types.

(*g*) *Air Compressors.*—Theory of pneumatic working.

Generating Plants, Accessories and Details—

(*a*) General arrangements and construction of the more important types.

(*b*) Condensers, air-pumps, circulating pumps, cooling tanks, etc.

(*c*) Carburettors, and systems of ignition.

(*d*) Cylinders, pistons, cross heads, guides, connecting rods, cranks, governors fly-wheels, valves and valve gears, glands and pipes.

(*e*) *Engine-Testing.*—Consumption of steam and fuel, gas and oil; brakes and dynamometers; indicators and indicator diagrams.

Hydraulics and Hydraulic Machines.

Hydraulics.—Definitions relating to flow of water; stream-line motion. Bernoulis theorem Venturimeter.

Flow of water through small and large orifices; drowned orifices; sudden enlargements and contractions in flow of water. Time of emptying tanks. Flood absorptive capacity of tanks.

Flow of water over notches and weirs.

Flow of water through pipes; hydraulic gradients; losses of head due to bends, contractions and sudden enlargements; losses of head through siphons. Impacts at bends and thrust blocks.

Flow of water in open channels and in pipe; Chezy, Basin, Kutters, and other formulae and their applications; cross sections of greatest efficiency.

Calculations of afflux and back water curve.

Gauging the flow of water in open channels; water-meters,

Hydraulics and hydrostatics of weirs and other canal works.

Hydrokinetics; uniform and steady flow streamline and turbulent motion. Bernoulli's theorem and its application.

Discharge through orifices and mouth pieces, and over notches and weirs. Variable heads. Laws of fluid friction. Head lost due to friction.

Hydraulic Machinery.—Impact of water on fixed and moving vanes. Turbines; impulse and reaction. Description of different types of turbines. Determination of vane-angles. Efficiencies of turbine plant. Governing.

Pumps.—Reciprocating, centrifugal and turbine.

Construction.

(*i*) *Building Materials.*

Stones.—Selection. Characteristics. Indian and European stones. Quarrying. Blasting. Dressing stone. Implements.

Bricks and Tiles.—Classes of bricks and their distinguishing qualities. Moulding. Drying and stacking. Brick-burning. Types of Kiln, Firebricks. Terracotta. Tile manufacture.

Cements, Limes and Mortars.—Use of mortar, Natural and artificial cements. Varieties of limes. Hydraulicity. Burning. Clamps. Kiln. Plaster. Whitewash. Distemper. Concrete. Portland cement.

Timber.—Growth of trees. Felling trees. Classification and properties of Indian and other woods. Most suitable woods for particular purposes.

Store Masonry.—Ashlar of various sorts. Block-in-course. Bond. Dressing-stone. Rubble masonry. Safe loads. Lewis. Dowel Joggle. Cramp. Template. Scaffolding. Shears. Derrick. Gyn. Gantry.

Brick Masonry.—Types and their uses. Bond. Closers. Bedding. Moisture Scaffolding. Precautions against settlement. Racking back. Plastering. Pointing. Coping. Cornice. Blocking course. Parapet. Eaves course. Corbel. Lintel. Jamb. Reveal. Sill. Footing. Drip-course. Pise walling. Dhajji walling. Hollow masonry. Reinforced brick-work.

(*ii*) *Design of Structures.*

Buildings.—Design of a residential bungalow ; with special reference to selection of site, construction of walls, damp-proof courses, water-supply, drainage and ventilation.

Fire-proof construction.

Reinforced brick-work design ; beams, floors, etc.

Thomson's principles of similar structures as regards their strength, stability, deflections, etc.

Bridges.—Selection of size. Determination of discharge of river by consideration of area of watershed, intensity of rainfall, and by zoning. Waterway to be provided. Depth of scour.

Design of foundation. Box ; crate ; well ; pile ; continuous masonry ; reinforced concrete slab, Piers, ordinary and abutment. Floors and curtain walls.

Reinforced Concrete.—Nature, uses, properties, advantages and disadvantages of Reinforced Concrete over other types of construction. Assumption made in theory of stress in reinforced concrete beams.

Theory and design of simple beams. T-beams and slabs for different conditions of loading.

(*iii*) *General principles governing the design of Railways, Roads, Harbours and other works.*

Roads.—Formation and permanent-way. Types of roadways. Hill roads. Ruling gradients. Resistance of vehicles. Drainage. Tramways.

Railways.—Formation and permanent way. Gauges. Tractive force. Tunnelling. Light railways and mountain railway.

River Training Works.—Spurs. Groynes.

Bell Bunds. Streamline Bunds. Mattresses. Aprons.

Miscellaneous.—Piles and pile-driving ; sheet and screwpiling. Diving operations, reclamations and dredging. Retaining walls. Depth of foundation. Counterforts and buttresses. Revetments. Construction and sinking of Masonry wells. Simple masonry dams. Technical names of various parts.

Surveying.

Surveying.—Construction of Scales. Conventional signs. Use and adjustment of instruments. Theory of levelling ; simple, compound check and reciprocal levelling. Various causes of errors in levelling. Elimination of such errors. Customary limits for errors. Method of keeping various styles of field-books. Use of boning rods. Chain survey. Chain and compass survey

Theodolite Traversing by Gale's traverse system for city and town improvement surveys. Source of errors and requisite precision in traversing. Traverse tables. Theory and use of the simple plane-table and its adjuncts, with and without the magnetic compass. Theory and use of the stadia method of plane tabling with level lines of sights and reductions of distances and heights by stadia. The three-point problem or plane-tabling by resection from three known points without using a magnetic needle. Mechanical and graphical proof of the three-point problem. The two-point problem with and without the magnetic compass. Triangulation with respective values; weights of stations; base line measurements. Finding values of position by observations to three known points. Computation by rectangular co-ordinates with convergency correction.

Contouring of the triangulation areas by heights calculated from the reduced levels. Longitudinal and cross sections run with the level. The location on the map of a road, railway canal or weir, etc. The general principles of tunnel alignment and of carrying surface meridians underground for mine-surveys. Discussion on the latest patterns of instruments.

Practical Astronomy. Introduction into spherical trigonometry up to the solution of the spherical triangle; and the adaptation of Napier's Rules of circular parts. Definitions; systems of celestial co-ordinates; the reasons for sidereal, sun and mean time; acceleration, retardation and equation of time. The Julian and Gregorian calendars; time and the various astronomical corrections.

Finding the meridian of a place by observations to the sun or a star at upper culmination, by equal altitudes, by the sun or stars not in the meridian, and by circumpolar stars at elongation; and finding time by the sun's transits on the meridian and ex-meridian; finding latitudes by Polaris and circum-meridional observations. Use and construction of sun dials.

Railway curves and Alignments.—Theory of curves. Curves laid out with the aid of angular instruments; with one theodolite. Curves laid out by linear measurement only. By chords and offsets (several methods). By offsets inside the curve. Curve by ordinates from the long chord. Curve with certain given data to pass through a ruling point. Compound curves. Diversion curve. Vertical curves. Curves spiral or transition curves. Double centre method for laying out a straight line. Setting out pegs for earth work. Computation of areas of cross sections, etc.

Sanitary Engineering and Water Supply.

Water Supply. Source of Supply.—Springs; wells; rivers; lakes; choosing the supply.

Water Works.—Intakes; settling tanks; filters; rates of filtration; various types of mechanical filtration.

Reservoirs.—Impounding, storage and service reservoirs; water towers.

Pipes.—Rising mains, expansion joints, pressure head; valves, service tanks; house connections; meters; cisterns.

Pumping Installations.—General types of installations used in India.

Sanitary Engineering.—Water purification; natural waters, impurities present; methods employed for rendering natural waters potable; boiler waters and softening agents; interpretation of analytical reports.

Sanitary laws; refuse removal and disposal; the chemistry of sewage; river pollution and its effects; sewerage systems; sewers, their construction and ventilation; traps; house drainage; purification of sewage, chemical precipitation and precipitants; liquefaction of sewage; sewage oxidation; irrigation and filtration; sewage farms; septic tanks; contact beds; the combined system; details of filtering tanks, filters and filtration distributors, etc.

Electrical Communication Engineering.

(A)—*Telegraphy.*

1. *Morse Telegraph Apparatus.*—Description of Signalling keys, Sounders. Relays, Galvanometers, Balancing boxes, Switches, etc., and their use in Morse Telegraphy.

Morse Circuits.—(*a*) Arrangements of apparatus and circuit connections for Simple and Differential and Bridge Duplex working Terminal and Repeater offices. Single current and Double current working.

(*b*) General principle of Quadruplex working.

3. *Multiplex Telegraphy.*—(*a*) Principle of Multiplex Baudot printing Telegraph. Different methods of working the Baudot system. Double and Quadruple working. Description of principal apparatus used in Baudot Telegraphy including Retransmitters, Tape Transmitters, Keyboard Perforators, etc., and their use.

(*b*) Teleprinter working. General principle of the " Stop-Start " system of working. Teleprinter and its principle of action. General knowledge of its principal parts.

4. *Testing of Lines and Cables*, and details of apparatus employed for such tests.

5. *Power arrangements* for Telegraph and Telephone offices. Use of Motor Generators, Rectifiers, Charging Boards, Primary Cells and Accumulators.

6. *Elementary Principles of Construction of Telegraph Lines.*—Description of Underground and Underwater cables. How they are manufactured and laid.

(B)—*Telephony.*

1. *Manual System.*—General principles of Magnetic, Semi Central Battery, and Central Battery systems of working. Details of Exchange and Sub-office apparatus, and their circuit diagrams including Private Branch office equipments. Protective devices in Exchange and Sub-offices and at Cable and Line Terminals. Details of Party Line working with Selective-ringing.

2. *Automatic Systems.*—General principles of well-kown systems of Automatic Exchanges. Schematic Circuit diagrams or principal Exchange equipments. Automatic Branch Exchanges. Details of Subscribers' Apparatus for the above systems.

3. *Telephone Transmissions.*—Principle of Transposition of Telephone Circuits. Prevention of Inductive Interference on Telephone Circuits. Characteristics of Telephone Circuits. Impedance of Telephone circuit and its measurement. Attenuation and Wave length Constants. Decibel and Neper. Mile Standard Cable. Transmission loss measurement. Wave filter. Carrier Current working. Telephone Repeater. Thermionic Valves and their use in Telephony.

(C)—*Radio Telegraphy and Telephony.*

1. General details of Oscillatory Circuits. Natural Frequency and Wavelength. Logarithmic decrement. Forced Oscillation.

Long Wave and Short Wave Radio working. Points of difference between the two systems.

Various methods of Reception and Transmission of Electric-magnetic waves. Different types of detectors and their adjuncts.

Thermionic valves as used in wireless Telegraphy and Wireless Telephony Valves as Detectors, Amplifiers, Rectifiers, Modulators and Oscillation Generators. Details of Transmitting and Receiving Circuits. Radiation of Electromagnetic Waves. Atmospheric effects. Fading.

Power plant for Wireless offices. Elementary principle of design of Aerials and Earths or Long and Short wave systems. Directional Transmission and Reception.

H7FPSC—1,000—26-6-39—GIPS

FORM.

1. Name.

2. Permanent address.

3. Subject or subjects and standard or standards for which *proposed* as examiner or moderator.

4. Academic or other similar distinctions. (In the case of technical subjects, membership of technical institutions of high standing, *e. g.*, the Institute of Civil Engineers, the Institute of Electrical Engineers etc., should be mentioned.)

5. Present position.

6. Teaching, experience if any.

7. Examining experience, if any.

8. List of publications of a learned or scientific character.

9. Remarks, if thought necessary.

GIPD—S3—179 FPSC—24-2-40—500.

LIST OF SUBJECTS

1. General English (Questions designed to test capacity to write and understand English)	A & B
2. English Essay	A & B
3. General Knowledge (including Knowledge of current events)	A & B
4. Elementary Science	B.
5. Modern Indian Languages (Assamese, Bengali, Gujrati, Hindi, Kanarese, Malayalam, Marathi, Oriya, Punjabi, Sindhi, Tamil, Telugu, Urdu)	A
6. Modern Indian Literatures (Bengali, Gujrati, Hindi, Marathi, Tamil, Telugu, Punjabi, Urdu)	A
7. Arabic Language	A & B
8. Arabic Civilization (including Muslim Philosophy)	A
9. Persian Language	A & B
10. Persian Civilization	A.
11. Sanskrit Language	A & B
12. Sanskrit Civilization (including Hindu Philosophy)	A
13. Pali Language	A
14. Pali Civilization	A
15. English Literature—General	A & B
16. English Literature—1580-1680	A
17. English Literature—1680-1780	A
18. English Literature—1780-1832.	A
19. English Literature—1832-1901	A
20. Modern European Languages (French and German)	A & B
21. Latin Language	A & B
22. Geography	A & B
23. Indian History—General	A & B
24. Indian History (from first Aryan immigration to the end of 12th century)	A
25. Indian History (from commencement of 11th century to 1748)	A
26. Indian History—1600-1919	A
27. Modern European History—1453-1740	A
28. Modern European History—1740-1920	A
29. British History—General	A & B
30. British History—1485-1714	A
31. British History—1714-1815	A
32. British History—1815 to present day	A
33. Economics and Economic History	A & B
34. General Economics	A & B
35. Public Economics	A
36. Statistics	A
37. Political Theory	A
38. Political Organisation	A
39. Moral Philosophy	A
40. Metaphysics	A
41. Logic	A
42. Psychology (including Experimental Psychology)	A
43. Mathematics	A & B
44. Lower Mathematics (Pure and Applied)	A & B
45. Higher Mathematics (Pure)	A
46. Higher Mathematics (Applied)	A
47. General Chemistry	A & B
48. Organic Chemistry	A & B
49. Inorganic Chemistry	A & B
50. Physics	A & B
51. Physics—General	B
52. Botany	A & B
53. Geology	A & B

54. Zoology	A & B
55. Physiology	A & B
56. Astronomy	A
57. Social Anthropology	A
58. Law (Constitutional Law of the British Empire, Jurisprudence, Torts, Indian Law of Contract, Indian Evidence Act and Indian Penal Code)	A & B
59. Indian Criminal Law & Procedure	A
60. Applied Mechanics	A
61. Electrical Engineering	A
62. Prime Movers	A
63. Hydraulics & Hydraulic Machines	A
64 Construction—(*a*) Building Materials (*b*) Design of structures, and (*c*) General principles governing design of railways, roads, harbours and works of a similar kind	A
65. Surveying	A
66. Sanitary Engineering and Water Supply	A
67. Electrical Communications Engineering	A

NOTE 1.—For subjects marked with a capital "A" the Federal Public Service Commission require examiners capable of setting a paper up to the standard of a Master's degree of an Indian University; for subjects marked with a capital "B" examiners capable of setting a paper up to the standard of a pass degree of an Indian University.

NOTE 2.—The syllabuses for subjects 60-67 are enclosed.

GIPD—M 68 F. P. S. C.—25-6-40.—800.

SYLLABUS OF THE EXAMINATION HELD BY THE FEDERAL PUBLIC SERVICE COMMISSION (INDIA) FOR RECRUITMENT TO ENGINEERING SERVICES.

NOTE.—There will be no practical examination in any of the subjects.

Applied Mathematics.

Statics.—Vectors. Notion of force. Gravitational or Engineer's unit of force. Various kinds of forces. Friction. Composition and resolution of concurrent forces. Moments. Parallel forces and centres of gravity. Couples. Conditions of equilibrium of non-current coplanar forces. Funicular Polygon.

Kinematics.—Units of space and time. Rectilinear motion; motion of a projectile; angular motion; relative motion; simple harmonic motion.

Kinetics.—Newton's Laws. Absolute system of units. Linear momentum. Impact of elastic bodies. Impulse and impulsive forces. Angular momentum; moments of inertia and radii of gyration; impulsive torque. Centrifugal forces, Conical pendulum. Motion of the centre of mass. Cant on railway curves and banking of road-tracks. Hoop stress and stress in the rim of a fly wheel.

Work, power, kinetic and potential energy. Principle of energy. Kinetic energy due to rotation. Work done by a couple. Principle of Virtual work. Simple machines, mechanical advantage, and velocity ratio. Stable and unstable equilibrium. Deflection in a framed structure. Oscillations. Simple and Compound pendulum. Units and dimensions.

Hydrostatics.—Fluid pressure, its transmission, and measurements; density; specific gravity; metric system of units; resultant pressure; centre of pressure; equilibrium of floating bodies; metacentre. Laws of Boyle and Charles. Mixture of gases. Nature and action of simple hydraulic machines.

Applied Mechanics.

(*a*) *Buildings.*

Consideration of materials used in the construction of roof-trusses. Steel and timber. Determination of stresses in trusses by various methods. Deadloads and wind pressure. Factors of safety and working stresses.

Design of roof-trusses. Various types of roof-trusses and roof coverings; collar beam and hammer beam trusses.

Use of Euler's, Gordon's, Rankine's, Fidler's, Johnson's and straight line formulæ in the design of struts. Buckling factor of struts; curves showing comparative strength of struts obtained by various formulae. Choice of size of sections. Finish of steel work. Joints. Design of end-bearings; methods of fixing and supporting en

Application of circles and ellipse of stress and Clapeyron's theorem to design of structures.

Cast Iron and Steel Columns.—Flange and web connections to steel columns; caps bases; transverse bracing of columns.

Foundations.—Safe pressures; foundations for columns. Slab foundations; cantilever foundations; Grillage foundations. Wells. Piles.

Retaining Walls and Earth-pressures.—Rankine's theory. Wedge theory, Winker's and Bligh's graphical constructions, with corrections. Design of various types of retaining walls in masonry.

Tall Masonry and Steel Chimneys.—Theory and design.

Design of steel and masonry reservoirs: with considerations of wind-pressures.

Deflection of framed structures and determination of stresses, etc., in redundant frames.

Influence diagrams for bending moment and shear for uniformly distributed and irregular loads on trusses, built-in beams, and three-pinned, parabolic, semi-elliptic and semi-circular arches.

General principles of dome design.

Principles of Building Design; consideration of loads on buildings. Steel-Works, girders, etc., for buildings.

(*b*) *Bridges.*

Design of superstructure. Determination by graphical and analytical methods of bending moment due to moving loads. Wind-pressures.

Design of masonry bridges and culverts.

Plate-web girders. Analysis of stresses.

Warren and lattice girders.

Three-pinned arches; doubly pinned and rigid arches.

General considerations on the design of suspension, cantilever, and tubular bridges.

Steel-arched bridges.

Swing bridges.

(*c*) *Reinforced Concrete.*

Shear, bond and diagonal tension, its nature, evaluation and location of reinforcement.

Design of simple and doubly reinforced beams and continuous beam.

Theory and design of reinforced concrete columns and piles.

Design of slab foundations.

Design of simple cantilever and counterfort retaining walls.

Equivalent moments of inertia for reinforced concrete sections.

Theory of elastic deflections and outline of investigation of stresses in reinforced concrete arches.

(*d*) *General.*

Analysis of stress, analysis of strain, elastic limit and ultimate strength. Relation between the elastic constants. Launhardt-Weyrauch formulæ for working stresses in a structural member and determination of its cross-sectional area. Repetition of stresses. Bending moment and shearing force diagrams for dead loads. Graphical determination of stresses in frames; effect of wind pressure; method of sections. Stress in the cross section of a beam due to bending (M. I. f y-E R); compound and conjugated stresses. Rankine's theory of earth-pressure; depth of foundations and strength of footings. Grillage foundations; Coulomb's theory of earth-pressure; modification due to Rebhan.

Bending moment and shearing force diagrams for live loads. Analysis of uniform and uniformly varying stress. Elastic theory of bending of beams; bending and shear stresses in beams. Modulus of section and equivalent areas. Maximum and minimum stresses in a joint due to eccentric loading. Stresses in dams and chimneys. Stability of block-work structures. Design of riveted joints and stresses in boiler shells. Euler's theory concerning struts; modifications due to Rankine, Gordon and others. Torsion. Combined torsion and bending deflections. Encastre beams. Continuous beams and theorem of three moments. Elastic theory of arches. Masonry arches.

Electrical Engineering.

Direct Current.—Principles of generators and motors. Types and characteristics. Starting and controlling appliances. Methods of testing of generators and motors. Operation in parallel of direct current generators. Types and general features of primary batteries. Testing of primary batteries. Types and testing of storage batteries. Method of charging. Boosters and other auxiliary appliances.

Alternating Currents.—Production of alternating currents. Frequency and wave shape. Graphic representation of current, voltage and power in A. C. circuits. Maximum and "R. M. S. Value" of simple sine wave. Effect of resistance, inductance and capacity in A. C. Circuit. Power and power factor in A. C. circuit. Single phase and poly-phase currents. Connections of poly-phase systems. Power measurement in poly-phase circuits. Theory of alternator and its regulation. Parallel running. Theory of transformer. Transmission of poly-phase currents. Synchronous motors and Induction motors. Methods of

starting. Efficiency and characteristics. Circle diagrams and testing of motors. Improvement of power factor. Motor converter and rotary converter and methods of starting of rotary converter. Principle of automatic voltage regulator.

Electrical Instruments and Measurements.—Principles of construction and theory of measuring instruments for direct and alternating currents. Commercial types. Calibration of instruments. Measurement of resistances. Ohm-Meters. Types of bridges for measuring resistances. Potentio-meter. Phase and frequency meters. Synchronoscope. Types of wattmeters.

Transmission and Distribution of Electrical Energy.—Systems of supply. Economic voltage and size of conductor. Formulæ for determination of size of conductor for standard systems of distribution, the load, voltage, etc., being given. Factors influencing voltage drop in D. C. and A. C. transmission lines. Influence of power factor of the load on voltage regulation of a transmission line. Standard equipment on generator and motor control panels for different types of D. C. and A. C. generators and motors.

Physics including Electricity and Magnetism.

Heat.—The methods of calorimetry and thermometry, Vapor-pressures, critical temperature and pressure. Conduction and diffusion of heat and the determination of constants. Radiation and absorption; laws of cooling. Theory of exchanges; methods of measuring radiation, Laws of thermodynamics; simple applications.

Light.—Velocity of light. Illumination; photometry. Achromatism in lens systems; direct-vision spectroscope.

The wave theory; simple interference phenomena, Huygens' principle, explanation of straightline propagation, reflexion, and refraction of light. Action of mirror, lenses, etc., reviewed from this standpoint. Simple diffraction phenomena, Gratings, and wave-lengths determination. Spectrum analysis; Doppler's principle. Double refraction and polarization of light; rotatory polarization; simple application.

Magnetism.—Forces on a magnet in a magnetic field. Determination of axes and moment of magnet. Magnetic potential, level surfaces. Interaction of two short magnets; determination of field strength. Magnetic shell; its potential energy in magnetic field. Total normal induction Gauss' theorem; number of lines of force. Magnetic induction in iron, etc. Theory of magnetism.

The magnetic field of the earth; the elements and their variations; the compass and its corrections.

Electricity.—Electric capacity; specific inductive capacity, Distribution of electricity on surface of conductors; images. Value of electric force in simple cases of distribution. The mechanical force on charged conductors; energy of electrified systems. The dielectric medium; dielectric displacement currents.

Wheatstone's bridge; specific resistance; resistance thermometers. Conductivity of electrolytes; ionization; migration phenomena; accumulators. Standard cells; the potentiometer system of measurement. Thermo electricity application of thermo-dynamics; thermo-electric diagrams. Electro-magnetic induction; coefficients of induction; induction coils. Energy of circuit carrying current when placed in a magnetic field; mechanical force on conductors carrying current; moving coil instruments. Lenz's law; illustration from dynamos and motors, etc. Determination of current resistance; E. M. F. in absolute measure. The discharge of a condenser; electric waves. Elementary theory of the electron.

The elementary theory of the continuous current dynamo and motor, and of the alternating current dynamo. General Principles of the application of electricity to lighting power, transmission, telegraphy, etc.

Sound.—The transmission of enegry through material media by wave-motion; speed of propagation of waves of permanent type. Nature of musical sounds; pitch; scales. Reflection and refraction of sound; influence of wave-length. The vibration of strings, bars, plates and gas columns, resonance. Interference and diffraction phenomena. Analysis of sound Measurement of wave-length, velocity and pitch.

Prime Movers.

Fuel Gas Plants and Boilers—

Fuel.—(*a*) Coal, wood, petroleum, gas, petrol, alcohol, etc., physical characteristics, approximate chemical composition; heat of combustion.

(*b*) *Gas Plants.*—Gas Producers; pressure and suction plants; arrangement and working.

(*c*) *Boilers.*—Draught; natural forced and induced. Ordinary forms of stationary, locomotive, marine, water-tube, and other type; heating surface, fire-grate area; boiler efficiency; superheaters; feedwater heaters; accessories and management.

Theory of Heat Engines—

(*a*) Thermodynamical principles; Carnot's cycle; perfect heat engine; second Law.

(*b*) *Air Engines.*—Stirling and other forms.

(*c*) *Internal Combustion Engines.*—Gas, oil and petrol engines with fluid pistons; types and working; features of cycles. Proportioning of mixtures; efficiencies.

(*d*) *Steam.*—Thermodynamics of the generation, expansion and condensation of steam; heat diagrams, etc.

(*e*) Steam Engines and turbines, with special reference to modern developments.

(*f*) *Refrigerating Plant.*—Theory and general arrangement of the more common types.

(*g*) *Air Compressors.*—Theory of pneumatic working.

Generating Plants, Accessories and Details—

(*a*) General arrangements and construction of the more important types.

(*b*) Condensers, air-pumps, circulating pumps, cooling tanks, etc.

(*c*) Carburettors, and systems of ignition.

(*d*) Cylinders, pistons, cross heads, guides, connecting rods, cranks, governors fly-wheels, valves and valve gears, glands and pipes.

(*e*) *Engine-Testing.*—Consumption of steam and fuel, gas and oil; brakes and dynamometers; indicators and indicator diagrams.

Hydraulics and Hydraulic Machines.

Hydraulics.—Definitions relating to flow of water; stream-line motion. Bernoulis theorem Venturimeter.

Flow of water through small and large orifices; drowned orifices; sudden enlargements and contractions in flow of water. Time of emptying tanks. Flood absorptive capacity of tanks.

Flow of water over notches and weirs.

Flow of water through pipes; hydraulic gradients; losses of head due to bends, contractions and sudden enlargements; losses of head through siphons. Impacts at bends and thrust blocks.

Flow of water in open channels and in pipe; Chezy, Basin, Kutters, and other formulae and their applications; cross sections of greatest efficiency.

Calculations of afflux and back water curve.

Gauging the flow of water in open channels; water-meters,

Hydraulics and hydrostatics of weirs and other canal works.

Hydrokinetics; uniform and steady flow streamline and turbulent motion. Bernoulli's theorem and its application.

Discharge through orifices and mouth pieces, and over notches and weirs. Variable heads. Laws of fluid friction. Head lost due to friction.

Hydraulic Machinery.—Impact of water on fixed and moving vanes. Turbines; impulse and reaction. Description of different types of turbines. Determination of vane-angles. Efficiencies of turbine plant. Governing.

Pumps.—Reciprocating, centrifugal and turbine.

Construction.

(*i*) *Building Materials.*

Stones.—Selection. Characteristics. Indian and European stones. Quarrying. Blasting. Dressing stone. Implements.

Bricks and Tiles.—Classes of bricks and their distinguishing qualities. Moulding. Drying and stacking. Brick-burning. Types of Kiln, Firebricks. Terracotta. Tile manufacture.

Cements, Limes and Mortars.—Use of mortar, Natural and artificial cements. Varieties of limes. Hydraulicity. Burning. Clamps. Kiln. Plaster. Whitewash. Distemper. Concrete. Portland cement.

Timber.—Growth of trees. Felling trees. Classification and properties of Indian and other woods. Most suitable woods for particular purposes.

Store Masonry.—Ashlar of various sorts. Block-in-course. Bond. Dressing-stone. Rubble masonry. Safe loads. Lewis. Dowel Joggle. Cramp. Template. Scaffolding. Shears. Derrick. Gyn. Gantry.

Brick Masonry.—Types and their uses. Bond. Closers. Bedding. Moisture Scaffolding. Precautions against settlement. Racking back. Plastering. Pointing. Coping. Cornice. Blocking course. Parapet. Eaves course. Corbel. Lintel. Jamb. Reveal. Sill. Footing. Drip-course. Pise walling. Dhajji walling. Hollow masonry. Reinforced brick-work.

(*ii*) *Design of Structures.*

Buildings.—Design of a residential bungalow ; with special reference to selection of site, construction of walls, damp-proof courses, water-supply, drainage and ventilation.

Fire-proof construction.

Reinforced brick-work design ; beams, floors, etc.

Thomson's principles of similar structures as regards their strength, stability, deflections, etc.

Bridges.—Selection of size. Determination of discharge of river by consideration of area of watershed, intensity of rainfall, and by zoning. Waterway to be provided. Depth of scour.

Design of foundation. Box ; crate ; well ; pile ; continuous masonry ; reinforced concrete slab, Piers, ordinary and abutment. Floors, and curtain walls.

Reinforced Concrete.—Nature, uses, properties, advantages and disadvantages of Reinforced Concrete over other types of construction. Assumption made in theory of stress in reinforced concrete beams.

Theory and design of simple beams. T-beams and slabs for different conditions of loading.

(*iii*) *General principles governing the design of Railways, Roads, Harbours and other works.*

Roads.—Formation and permanent-way. Types of roadways. Hill roads. Ruling gradients. Resistance of vehicles. Drainage. Tramways.

Railways.—Formation and permanent way. Gauges. Tractive force. Tunnelling. Light railways and mountain railway.

River Training Works.—Spurs. Groynes.

Bell Bunds. Streamline Bunds. Mattresses. Aprons.

Miscellaneous.—Piles and pile-driving ; sheet and screwpiling. Diving operations, reclamations and dredging. Retaining walls. Depth of foundation. Counterforts and buttresses. Revetments. Construction and sinking of Masonry wells. Simple masonry dams. Technical names of various parts.

Surveying.

Surveying.—Construction of Scales. Conventional signs. Use and adjustment of instruments. Theory of levelling ; simple, compound check and reciprocal levelling. Various causes of errors in levelling. Elimination of such errors. Customary limits for errors. Method of keeping various styles of field-books. Use of boning rods. Chain survey. Chain and compass survey.

Theodolite Traversing by Gale's traverse system for city and town improvement surveys. Source of errors and requisite precision in traversing. Traverse tables. Theory and use of the simple plane-table and the prismatic circumferentor, with and without the magnetic compass. Theory and use of the stadia method of plane tabling with levelled heights and reductions of distances and heights by stadia. The three-point problem or plane-tabling by resection from within and without the triangle. Geometrical and trigonometrical proof of the three-point problem. The two-point problem with and without the magnetic compass. Triangulation with its appropriate values. Units of standards; base line measurements. Finding values of position by observations to three known points. Computation by rectangular co-ordinates with convergency correction.

Contouring of the triangulated areas by heights calculated from the reduced levels. Longitudinal and cross sections from reduced levels. The location on the map of a road, railway canal or weir, etc. The general principles of tunnel alignment and of carrying surface meridians underground for mine-surveys. Discussion on the latest patterns of instruments.

Practical Astronomy. Introduction to spherical trigonometry; the solution of the spherical triangle; and the adaptation of Napier's rules of circular parts. Definitions; systems of celestial co-ordinates; the relations for sidereal, solar and mean time; acceleration, retardation and equation of time. The solar and sidereal chronometer; time and the various astronomical corrections.

Finding the meridian of a place by observations to the sun or a star at upper culmination, by equal altitudes, by the sun or stars on the meridian, and by circumpolar stars at elongation; and finding time by the sun or stars on the meridian and ex-meridian; finding latitudes by Polaris and circum-meridional observations. Use and construction of sundials.

Railway curves and Alignment.—Theory of curves. Curves laid out with the aid of angular instruments; with one theodolite. Curves laid out by linear measurement only. By chords and offsets (several methods). By offsets inside the curve. Curve by ordinates from the long chord. Curve with certain given data to pass through a ruling point. Compound curves. Diversion curve. Vertical curves. Curves spiral or transition curve. Double centre method for laying out a straight line. Setting out pegs for earth work. Computation of areas of cross sections, etc.

Sanitary Engineering and Water Supply.

Water Supply. Source of Supply.—Springs; wells; rivers; lakes; choosing the supply.

Water Works.—Intakes; settling tanks; filters; rates of filtration; various types of mechanical filtration.

Reservoirs.—Impounding, service and service reservoirs; water towers.

Pipes.—Rising mains, supply mains, distributing mains and service tanks; house connections; mettres; cisterns.

Pumping Installations.—Various types of installations used in India.

Sanitary Engineering.—Water examination; impurities present; methods employed for rendering water suitable; bacteriology and testing agents; interpretation of analytical reports.

Sanitary laws, refuse removal, disposal; bacteriology of sewage; river pollution and its effects; sewerage systems, combined, separate construction and ventilation; traps; house drainage; purification of sewage by precipitation and precipitants; liquefaction of sewage; sewage oxidation; irrigation and broad sewage; septic tanks; contact beds; the combined system; detritus tanks, filters and filtration distributors, etc.

Electrical Communication Engineering.

(A)—*Telegraphy.*

1. *Morse Telegraph Apparatus.*—Description of Signalling keys, Sounders, Relays, Galvanometers, Balancing boxes, Switches, etc., and their use in Morse Telegraphy.

Morse Circuits.—(*a*) Arrangements of apparatus and circuit connections for Simple and Differential and Bridge Duplex working Terminal and Repeater offices. Single current and Double current working.

(*b*) General principle of Quadruplex working.

3. *Multiplex Telegraphy.*—(*a*) Principle of Multiplex Baudot printing Telegraph. Different methods of working the Baudot system. Double and Quadruple working. Description of principal apparatus used in Baudot Telegraphy including Retransmitters, Tape Transmitters, Keyboard Perforators, etc., and their use.

(*b*) Teleprinter working. General principle of the " Stop-Start " system of working. Teleprinter and its principle of action. General knowledge of its principal parts.

4. *Testing of Lines and Cables,* and details of apparatus employed for such tests.

5. *Power arrangements* for Telegraph and Telephone offices. Use of Motor Generators, Rectifiers, Charging Boards, Primary Cells and Accumulators.

6. *Elementary Principles of Construction of Telegraph Lines.*—Description of Underground and Underwater cables. How they are manufactured and laid.

(B)—*Telephony.*

1. *Manual System.*—General principles of Magnetic, Semi Central Battery, and Central Battery systems of working. Details of Exchange and Sub-office apparatus, and their circuit diagrams including Private Branch office equipments. Protective devices in Exchange and Sub-offices and at Cable and Line Terminals. Details of Party Line working with Selective-ringing.

2. *Automatic Systems.*—General principles of well-kown systems of Automatic Exchanges. Schematic Circuit diagrams or principal Exchange equipments. Automatic Branch Exchanges. Details of Subscribers' Apparatus for the above systems.

3. *Telephone Transmissions.*—Principle of Transposition of Telephone Circuits. Prevention of Inductive Interference on Telephone Circuits. Characteristics of Telephone Circuits. Impedance of Telephone circuit and its measurement. Attenuation and Wave length Constants. Decibel and Neper. Mile Standard Cable. Transmission loss measurement. Wave filter. Carrier Current working. Telephone Repeater. Thermionic Valves and their use in Telephony.

(C)—*Radio Telegraphy and Telephony.*

1. General details of Oscillatory Circuits. Natural Frequency and Wavelength. Logarithmic decrement. Forced Oscillation.

Long Wave and Short Wave Radio working. Points of difference between the two systems.

Various methods of Reception and Transmission of Electric-magnetic waves. Different types of detectors and their adjuncts.

Thermionic valves as used in wireless Telegraphy and Wireless Telephony Valves as Detectors, Amplifiers, Rectifiers, Modulators and Oscillation Generators. Details of Transmitting and Receiving Circuits. Radiation of Electromagnetic Waves. Atmospheric effects. Fading.

Power plant for Wireless offices. Elementary principle of design of Aerials and Earths or Long and Short wave systems. Directional Transmission and Reception.

H7FPSC—1,000—26-6-39—GIPS

List of persons recommended on the last occasion

(1) Mr. J. C. Rollo ✓
(2) Mr. F. R. Sell ✓ Rtd from Mysore Service
(3) " B. M. Srikantiah ✓
(4) Dr M A Sampath Kumaran ✓
(5) Mr. K. B. Madhava.
(6) " S. V. Venkatarama Iyer ✓ Rtd from Madras Service
(7) " Dr. A Subba Rao ✓
(8) " B. Sanjeeva Rao ✓
(9) M. H. Krishna ✓
(10) M V Gopaleswami ✓
(11) Sh Lakshminarasappa. ✓
(12) Dr B K Narayana Rao. ✓
(13) Mr. C. R. Narayana Rao ✓
(14) " B Venkatachar - Rtd ✓
(15) " N. S. Subba Rao.
" S. Sultan Mohiyuddin ✓
(16) Dr. E. P. Metcalfe ✓ Rtd from Mysore Service
(17) Mr. A S Mackintosh. ✓
18. " P. Sampat Iyengar — Since deceased
19. " A R Wadia ✓
20 " Aga Mohamed Abbas Shooshy.
21. " E K Ramaswamy ✓
22. " R Narasimhachar — Since deceased
23 "
24 Dr R Shama Sastry.
25. Mr. M T Narayanaiyengar — do —
26. Dr K. Kuppuswami — Since deceased
27. Mr. K Srinivasiengar — do —
28. " S. G. Forbes.
29. " M. G. Rangiah Rtd
30. M. J. Hiriyannah. Rtd

Appendix F G—1]

SUBJECT.....

.....

.....

Section P.P

File No.

Serial No.

Diary No. of letter replied to.....

No. 1199-1202

General and Revenue Secretariat

( )

the *19*

To The Registrar. Mysore University
D. P. I.
Chief Engineer & Secy to Govt PWD.
Secy to Govt Elect Dept

Date of issue 27.8.40

Panel of Examiners for examinations conducted by the F. P. S. C.

Signed by Mr. B.T.K.

Sir, I am directed to enclose herein a copy of letter from the Secy. F. P. S. C, No. F. 2/8/40-E & the 28th July. 1940 on the above subject and to request that the names of persons, if any, in the Dept. who are considered suitable for inclusion in the Commission's panel of examiners

List of enclosures.....

Copied by .....

Examined by .....

WD 03695—GPB—30,000—29-1-40

1557/40

No. E.D.S. 507
Encls. Statement

ELECTRICAL SECRETARIAT,

Dated Bangalore, 2nd September 1940

FROM

The Secretary to the Government of Mysore,
Electrical Department,
Bangalore.

To

The Chief Secretary to Government,
B a n g a l o r e.

Subject:- Panel of Examiners for examinations conducted by the Federal Public Service Commission.

S i r,

With reference to your letter No.P.1199-1202/P.P. dated the 27th August 1940 on the above subject, I have the honour to forward herewith a nil statement.

I have the honour to be,
S i r,
Your most obedient servant,

D. S. Venkatarao
Secretary to Government,
Electrical Department.

A.N.

Names of persons in the Electrical Secretariat, who are considered suitable for inclusion in the Commission's panel of examiners.

N I L

For Secretary to Government,
Electrical Department.

1602 P 40

WD 572—GBPM—5,000—21-10-32.

FROM

THE CHIEF ENGINEER OF MYSORE,
BANGALORE.

To

The Chief Secretary to Government,

B a n g a l o r e.

Dated Bangalore, 6th September 1940.

Despatched

Received

General No. 2782

Enclosure No.

Subject:- Panel of Examiners for examinations conducted by the Federal Public ---- Service Commission.

Sir,

With reference to your letter No.P. 1199-1202/P.P. dated 27th August 1940, I have the honour to request you kindly to forward, for reference, a copy of your letter No.6323/ 167/1928 Ecn.14 dated 25th July 1929.

I have the honour to be,
Sir,
Your most obedient servant,

D. V. Veerabhadraiah
for CHIEF ENGINEER OF MYSORE.

T.R.S./3-9.

The Chief Engineer of Nyan

Subject:- Panel of Examiners for examinations conducted by the Zonal Public Service Commission.

Sir, With reference to your letter no 2782 of 6th Sept R. Ao on the above subject, I am directed to inform you that the letter required by you was addressed by the Registry to the Secretary. Z.P.S.C and as such this office has no copy of that letter. I am however enclosing herein a copy of your letter 126/K.S.S. of 16th June 19 recommending the name of Mr. M. G. Rungaiya on the last occasion.

I have the

Nov 14/19

For Chief Engineer

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

Dated, Bangalore, 14th September 1940.

No. P 1569/PP Encl

From

The Chief Secretary to the Government of His Highness the Maharaja of Mysore.

To

The Chief Engineer of Mysore,
Bangalore.

Sir,

Subject: Panel of Examiners for examinations conducted by the Federal Public Service Commission.

With reference to your letter No.2782 dated the 6th September 1940 on the above subject, I am directed to inform you that the letter required by you was addressed by the Residency to the Secretary, Federal Public Service Commission and as such this office has no copy of that letter. I am however enclosing herein a copy of your letter No.126/K.S.S. dated the 16th June 1939 recommending the name of Mr.M.G.Rangaiya on the last occasion.

I have the honor to be,
Sir,
Your most obedient servant

14/9

For CHIEF SECRETARY TO GOVERNMENT.

TN)

EDN. NEW 92]

1853 P

Postal Address:—POST BOX No. 8.
Tel. Address:—EDUCATION, Bangalore.

Department of Public Instruction.

Government of Mysore.

No. E5. 774-8/40-41.

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION IN MYSORE,

ENCL.

Bangalore, dated 14th September 1940.

FROM

16 SEP 1940

E. G. McALPINE, ESQ., M.A., DIP. EDN., V.D., J.P.,
DIRECTOR OF PUBLIC INSTRUCTION IN MYSORE,
BANGALORE.

CHIEF SECRETARY. 17. SEP. 1940 GOVT. OF MYSORE.

To

The Chief Secretary to Government of
His Highness the Maharaja of Mysore.

SIR,

With reference to your letter No. P. 1199-1202/P.P. dated the 27th August 1940 requesting that the names of persons, if any, in the Department, who are considered suitable for inclusion in the Commission's Panel of Examiners, may be furnished, I have the honour to request you kindly to forward a copy of the list previously sent to the Commission by the Government of Mysore for my reference in order to see what changes or additions are necessary in the list referred to.

I have the honour to be,
Sir,
Your most obedient servant,

C. Srinivasan

for Director of Public Instruction.

BSR.

Appendix F G—1]

SUBJECT.....

.....

.....

Diary No. of letter replied to.....

Section

File No.

Serial No

No. P 1664/PP

General and Revenue Secretariat

( )

the 19

To The Director of Public Instruction

Sir,

With reference to your letter no E.5. 774-8/40-41 dated 16th Sept. I am directed to ~~inform~~ state you that the marginally noted persons were recommended for inclusion in the Commissioners panel of examiners on the last occasion, as seen from your office letter (D.O. 986/P.S. dated 25th May 1929.)

Date of issue 20.9.40

Signed by Mr. M.K.V.

Mr. N. S. Subba Rao
" M. Sultan Mohiyuddin

List of enclosures.....

Copied by .....

I have

Examined by.....

MKV 19/9

For Chief Secy to Govt

2097/40
pp

WD 572—GBPM—5,000—21-10-32.

FROM

THE CHIEF ENGINEER OF MYSORE,
BANGALORE.

To

The Chief Secretary to Government,
Bangalore.

CHIEF SECRETARY. P.P. 27. SEP. 1940 GOVT. OF MYSORE.

Dated Bangalore, 26-9-1940.

Despatched

Received

General No. 3705

Enclosure No. One

Subject:- Panel of persons capable of serving as examiners or moderators for -- examination.

Sir,

With reference to your letter No. P. 1199-1202/p.p. dated the 27th August 1940, I have the honour to state that the names of marginally noted officers may kindly be caused to be included in the list referred to.

2. The required form in connection with the above is also herewith enclosed duly filled in.

I have the honour to be
Sir,
Your most obedient servant,

Chief Engineer of Mysore.

A.K.

1. Mr. L.A.H.Winckler, A.C.G.I., M.I.E., (Ind).,
2. " B. R. Garudachar, B.A., C.E., M.I.E., (Ind).,
3. " G. Seshagiri Rao, L.C.E., M.I.E., (Ind).,
4. " B. Krishna Rao., B.A., C.E., M.I.E.,
5. " V. Ganesha Iyer, B.A., B.C.E., M.I.Mech.E.,
6. " N. Lakshminarasimhaiah, B.A., B.E., M.I.E., (Ind).,

Mr. V. Ganesha Iyer.	Mr. G. Seshagiri Rao.
(Retired) Superintending Engineer, Basavangudi, Bangalore.	Superintending Engineer, Irrigation Circle, Mysore.
Mechanical Engineering.	Expert in Civil Engineering "Irrigation"
B.A., A.C.E., M.I.Meh.E., M.I.E., (Ind)	L.C.E., M.I.E., (I_nd)
(Retired) Superintending Engineer.	Superintending Engineer.
Was working as Professor of Mechanical Engineering and Principal, Engineering College.	Nil.
Has worked as Examiner, Departmental Examination, Mysore Public Works --- Department.	Has worked as Examiner, Departmental examination, Mysore Public Works -- Department.
He was an officer with Foreign qualifications and varied experience in the several Departments of the Mysore State.	He is an officer with more than 28 years of varied experience in the Department.

Mr. N. Lakshminarasimhaiya.

Executive Engineer,
Bangalore Division,
B a n g a l o r e.

Civil Engineering, Roads, Bridges and Buildings.

B.A., B.E., M.I.E., L.(Ind)

Senior Executive Engineer.

Nil.

Has worked as Examiner, Departmental examination, Mysore Public Works Department.

An officer with more than 27 years varied experience in the Department.

N. Lakshminarasimhaiya
Chief Engineer of Mysore.

A.K.

Appendix F G—1]

SUBJECT.....

.....

.....

Section

File No.

Serial No.

Diary No. of letter replied to.....

No. P 1818

General and Revenue Secretariat

( )

the *19*

To The Chief Engineer of Mysore.

Panel of Examiners for examination conducted by the F. P. S-C.

Date of issue..... 28/9/40.

Signed by .....

Sir,

With reference to your letter no 37057 28th Sept. 40 on the above subject I am directed to request you to kindly obtain the prescribed forms direct from the Commission and to fill up the required particulars in respect of the officers recommended as already desired in this office letter no P. 1199-121 2 dated 27th Aug. 40.

The reply may be furnished to

List of enclosures.....

Copied by .....

Examined by .....

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

Dated, Bangalore, 28 Sept. 1940.

No. P/1818

FROM

The Chief Secretary to the Government of His Highness the Maharaja of Mysore.

To

The Chief Engineer of Mysore,

Bangalore.

Sir,

Panel of Examiners for examinations conducted by the F.P.S.C.

With reference to your letter No.3705 dated 26th September 1940 on the above subject, I am directed to request you to kindly obtain the prescribed forms direct from the commission and to fill up the required particulars in respect of the officers recommended as already desired in this office letter No.P.1199-1202 dated 27th August 1940. The reply may be furnished to this office before the 15th November 1940.

I have the honour to be,
Sir,
Your most obedient servant,

28/9

for Chief Secretary to Government.

K.M.R.2.

DEPARTMENT OF PUBLIC INSTRUCTION.
GOVERNMENT OF MYSORE.

Postal Address:
Post Box No. 8,
BANGALORE,

Dated 24th October 1940.

D.O. Ss. 774-8 of 1940-41

E. G. McALPINE, M.A. (Edin.),
Dip. Edn. (Edin.), V.D., J.P.,
Director of Public Instruction.

CB. 25/10

Dear Mr. Kesavaiengar,

Hy B Q

In your office letter No.P.1664/PP. of 20th September 1940, allusion is made to a D.O.letter No.986/P.S. dated the 25th May 1929 from this office. I am unable to find this letter in the records of the Personal Section of my office, and it must presumably have been destroyed. If by any chance it still exists in the Secretariat records, I shall be glad if you could send me a copy of it, as I should like to see whether in 1929 my predecessor gave any reason for recommending the name of Mr. Sultan Mohiyuddin.

Mr. Mohiyuddin took a Master's Degree in Education in the Leeds University, and is certainly well qualified in any subject dealing with the training of teachers, but from the list of examination subjects sent by the Secretary to the Federal Public Service Commission, I find that the subject of Education does not appear. I believe Mr.Mohiyuddin's M.A. subject was Philosophy, but he has not maintained any professional contact with that subject during the last 20 years, and so far as I know he has never been employed as an examiner in Philosophy either by the University of Mysore or by any other University. He would, I think, be the first person to admit that at this date, or even in 1929, he was no longer sufficiently in touch with the subject to be able to examine Philosophy candidates on the University standard. Knowing these facts, I do not understand why his name was recommended in 1929, and wonder whether a copy of my predecessor's letter might throw any light on the subject.

Yours sincerely,
E G McAlpine
24/10/40

Rajasevaprasaktha

B. T. Kesavaiengar, Esq., B.A.,

Bangalore.

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

No. Secret/P 4367 Secret I (Home Secrets)

Dated, Bangalore, 28th February ~~xxx~~ 1941.

From

The *Chief Secretary to the Government of His Highness the Maharaja of Mysore.*

To

The Superintendent,
Government Printing,
Bangalore.

Sir,

I am directed to return herewith the proof relating to the Railway Strike Protection Scheme, 1940, duly corrected and to request you to kindly print and supply 300 copies direct to the Inspector General of Police and 25 copies to this office as already desired in this office letter No.P.3907, dated 28th January 1941.

I have the honor to be,
Sir,
Your most obedient servant

21/2

For Chief Secretary to Government

Appendix F G—1]

SUBJECT.....

.....

.....

Diary No. of letter replied to.....

General and Revenue Secretariat

( )

the *193*

Date of issue 28/10/40

Signed by M. M. K. Q.

for information

flag Q.

List of enclosures.....

Copied by.....

Examined by.....

Section

File No.

Serial No.

No. P2163/Enc.

To The D. P. I

Panel of Examiners for examinations conducted by the F. P. S. C.

Sir,

With reference to your D. O. E. S. 774-8 of 1940-41 dated 24th Octr 40 on the above subject, I am directed to forward herewith a copy of letter dated 25th May 1929 from the D P I with the forms enclosed regarding Mr. Sultan Mohiyuddin.

I have the

28/10

for Chief Secretary to Govt.

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

No. P2162/Educ 2 Dated, Bangalore, 29th October ~~193~~ 1940.

From

The *Chief Secretary to the Government of His Highness the Maharaja of Mysore.*

To

The Director of Public Instruction in Mysore,
Bangalore.

Sir,

Subject:-Panel of Examiners for examinations conducted by the F.P.S.C.

With reference to your D.O. E.5:774-8 of 1940-41, dated 24th October 1940 on the above subject, I am directed to forward herewith for information a copy of letter dated 25th May 1929 from the Director of Public Instruction with the form enclosed regarding Mr. Sultan Mohiyuddin.

I have the honor to be,
Sir,
Your most obedient servant,

29/10

For Chief Secretary to Government

3076/40

No. S 967
Encls.

MYSORE PUBLIC WORKS DEPARTMENT,
CENTRAL OFFICE.

Dated Bangalore, 16th November 1940.

FROM

The Chief Engineer of Mysore,
BANGALORE.

To

The Secretary,
Federal Public Service Commission,
D E L H I.

Subject:- Panel of Examiners for examinations conducted by the Federal Public Service Commission.

Sir,

I have the honour to invite kind reference to this office letter No.C.303 dated 18th October 1940 and to request you to be so good as to forward the prescribed forms at a very early date.

I have the honour to be,
Sir,
Your most obedient servant,

Sd/-. N. Sarabhoja,

CHIEF ENGINEER OF MYSORE.

T.R.S./16-11.

No. S 968 Dated Bangalore, the 16th November 1940.

Copy of the above is forwarded, with compliments, to the Chief Secretary to the Government of Mysore, for information.

For Chief Engineer of Mysore.

Subd for perusal. The list of examiners from the Regr. of Sj & others are done in this office by the 15th inst. If approved T.R.S. a reminder will be sent to them by the 25th inst. The lists have to be sent to the Registrar by the 15th Dec. 1940.
Issue a reminder
19/11

Subd with a draft & form for a reminder
Issue
29/11

Mysore 2000-29-2-41-25M-nov. 40.

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

Dated, Bangalore, 20th November 1940.

No. P2680-2

From

The Chief Secretary to the Government of His Highness the Maharaja of Mysore.

To The Registrar, Mysore University.
" Director of Public Instruction.
" Chief Engineer of Mysore.

Subject:- Panel of Examiners for examinations conducted by the Federal Public Service Commission.

Sir,

I am directed to invite reference to this office letter No. P. 1199-1202, dated 27th August 1940 on the above subject, and to request you to kindly furnish the required information very early for intimation to the Residency.

I have the honor to be,
Sir,
Your most obedient servant

For Chief Secretary to Government

3165 P 40

EDN. NEW 92]

Postal Address:—POST BOX No. 8.
Telegraphic address:—EDUCATION, Bangalore.

Department of Public Instruction.

Government of Mysore.

REVENUE SECRETARIAT
22 NOV. 1940

Mem 22/11

No. E5 - 774-8 of 40-41.

OFFICE OF THE DIRECTOR OF PUBLIC INSTRUCTION IN MYSORE,

ENCL. One

Bangalore, dated 21st November 1940.

FROM

E. G. McALPINE, ESQ., M.A., DIP. EDN., V.D., J.P.,
DIRECTOR OF PUBLIC INSTRUCTION IN MYSORE,
BANGALORE.

21 NOV 1940

To

Rajasevaprasaktha
B.T.Kesavaiengar, Esq., B.A.,
Chief Secretary to the Government of
His Highness the Maharaja of Mysore,
Bangalore.

SIR,

SUBJECT: Panel of Examiners for examinations conducted by the Federal Public Service Commission.

—

With reference to correspondence ending with your letter No.P.2163 dated 29th October 1940 on the above subject, I have the honour to state that when a panel of names was last asked for 11 years ago, my predecessor in office submitted two names, namely, his own and that of Mr.Sultan Mohiyuddin. As Mr.N.S.Subba Rao is now the Vice-Chancellor of the University, his name will be submitted, if at all, from the University.

As regards Mr.Sultan Mohiyuddin, I find on enquiry from him that he has never been asked to examine during the last 11 ~~xxx~~ years by the Federal Public Service Commission, and he informs me that he does not desire his name to be submitted on this occasion.

I am submitting my own name for examining work in English Literature in the I.C.S.Examination, as my name is upon the panel, and I have been employed as an examiner several times for the past five years. I attach the necessary form duly filled up. There are no other officers in the Department whom I think are competent to examine under the Federal Public Service Commission.

I have the honour to be,
Sir,
Your most obedient servant,

E G McAlpine 21/11/40
Director

No. 70231/6. 3485/40

Immediate

MYSORE PUBLIC WORKS DEPARTMENT,
CENTRAL OFFICE.

Dated Bangalore, the 27/12/ *1940*

FROM

The Chief Engineer of Mysore,
BANGALORE.

To

The Chief Secretary to Government,
Bangalore.

PP
6. DEC. 1940
GOVT. OF MYSORE.

Panel of Examiners for Examinations conducted by the Federal Public Service Commission.

Sir,

With reference to your letter No.P.1818 dated 28th September 1940, I have the honour to forward herewith, six statements, with the required particulars, in the prescribe form.

I have the honour to be
Sir,
Your most obedient servant,

N. Santhaya 27/12/40

Chief Engineer of Mysore.

TSRN.

3261/40
P

Tel. Address: **UNIREG.'**
Telephone **No. 277.**

University of Mysore

P.P. 27 NOV. 1940

No. 14260
Enc. 1+35

Office of the University of Mysore,

Mysore, Dated 26. 11. 1940.

FROM

DR. C. S. PICHAMUTHU, B.Sc., PH.D., (GLAS.)., F.R.S.E., F.G.S.,
Offg. Registrar, University of Mysore,
Mysore.

CHIEF SECRETARY. 27 NOV. 1940 GOVT. OF MYSORE.

Rajasevaprasakta B.T.Kesaviengar, Esq., B.A.,
Chief Secretafy to the Government of
His Highness the Maharaja of Mysore,
Bangalore.

Sir,

With reference to your letter No.P.1199-1202/P.P., dated the 27th August 1940 forwarding a copy of letter No.F.2/8/40-E, dated the 26th July 1940 from the Secretary, Federal Public Service Commission regarding the panel of Examiners for examintaions conducted by the Commission and calling for a list of the names of persons in the University who are considered suitable for inclusion in the Commissions panel of examiners, I am directed to forward herewith a list of Professors and Assistant Professors (in the prescribed form) who are considered suitable for inclusion in the Commission's panel of examiners.

I have the honour to be,
Sir,
Your most obedient servant,

Chas Krishnamurthy

Offg.Registrar.

GS.

UNIVERSITY OF MYSORE.

List of Professors and Assistant Professors recommended by the Heads of Colleges for inclusion in the Commission panel of Examiners.

A. PROFESSORS.

1. English.	..	1. Mr. A.B.Mackintosh. 2. " J.C. Rollo. 3. " B.M. Srikantia. 4. " W.G. Eagleton.
2. Kannada.	..	5. " A.R.Krishna Sastri.
3. Sanskrit.	..	6. " C.R. Narasimha Sastri.
4. Economics	..	7. " V.L.D'Souza.
5. Philosophy.	..	8. " A.R.Wadia.
6. Pschology.	..	9. Dr. M.V. Gopalaswami.
7. Mathematics.	..	10. Mr. K.S.K.Iyengar. 11. " K.B. Madhava. 12. Dr. B.S. Madhava Rao. 13. " C.N.Srinivasiengar.
8. Physics.	..	14. Mr.A.Venkata Rao Telang.
9. Chemistry.	..	15. Dr. B.Sanjiva Rao. 16. " B.L.Manjunath. 17. " C. Srikantia. 18. Mr. M.Sesha Iyengar (Assistant Professor.)
10. Geology.	..	19. Mr. L. Rama Rao. 20. Dr. C.S. Pichamuthu.
11. Zoology.	..	21. Dr. A. Subba Rau.
12. Botany.	..	22. Dr.M.A.Sampathkumaran.
13. Teaching.	..	23. Dr. M. Siddalingiya.
14. Engineering and Technology.	..	24. Mr. E.K.Ramaswamy. 25. " J.P.Das. 26. " K.D. Joshi.

B. Assistant Professors.

1. Physics.	..	Dr.L.Sibaiya. Mr.T.S.Subbaraya. Dr.S.Ramaswamy.
2. Zoology.	..	Dr. B.R.Seshachar. Dr.B.Tirumalachar.
3. English.	..	Mr. K. Anantharamiah. Mr.B.S.Kesavan.
4. History.	..	Dr.K.N.Venkatasubba Sastri. Mr. M.V.Krishna Rao.

Appendix F G—1]

SUBJECT.....

.....

.....

Section P.P.

File No. 23-40

Serial No. 2.

Diary No. of letter replied to.....

No. Pol 838 Eds

To The Secy to the Hon'ble the Resident,

General and Revenue Secretariat

( )

the *19*

Panel of Examiners for examinations conducted by the T.P.S.C.

Sir,

Date of issue 11. 12. 1940

With reference to your memo no. D.F. 526-40/G+A dated 11th August 1940, I am directed to forward herewith a revised list of the names of persons who are considered suitable for inclusion in the Commission's panel of examiners together with full particulars concerning them in the prescribed form.

Signed by Mr. M. K. V.

List of enclosures.....

Copied by .....

I have the

Examined by .....

9/12

WD 03695—GPB—30,000—29-1-40

Chief Secy to Govt

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

Dated, Bangalore. 11th December 1940.

No. L1 838 Cls

From

The Chief Secretary to the Government of His Highness the Maharaja of Mysore.

To

The Secretary to the Hon'ble the Resident in Mysore.

Sir,

Subject:- Panel of Examiners for examinations conducted by the Federal Public Service Commission.

With reference to your Memo No. D.F. 526-40/G & A. dated Nil August 1940, I am directed to forward herewith a revised list of the names of persons who are considered suitable for inclusion in the Commission's panel of examiners together with full particulars concerning them in the prescribed form.

I have the honor to be,
Sir,
Your most obedient servant,

11/12

for Chief Secretary to Government.